

# OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

*Edited by*

**FRANCIS HEMMING, C.M.G., C.B.E.**  
Secretary to the Commission

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## OPINION 495

Designation under the Plenary Powers of a type species  
in harmony with accustomed usage for the nominal  
genus *Unio* Philipsson, 1788 (Class Pelecypoda) and  
validation under the same Powers of the family-group  
name MARGARITIFERIDAE Haas, 1940



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# INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

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## OPINION 495

DESIGNATION UNDER THE PLENARY POWERS OF A  
TYPE SPECIES IN HARMONY WITH ACCUSTOMED  
USAGE FOR THE NOMINAL GENUS “ UNIO ”  
PHILIPSSON, 1788 (CLASS PELECYPODA)  
AND VALIDATION UNDER THE SAME  
POWERS OF THE FAMILY-GROUP NAME  
“ MARGARITIFERIDAE ” HAAS, 1940

**RULING :—**(1) The following action is hereby taken  
under the Plenary Powers :—

(a) All selections of type species for the genus *Unio* Philipsson, 1788 (Class Pelecypoda) made prior to the present Ruling are hereby set aside and the nominal species *Mya pictorum* Linnaeus, 1758, is hereby designated to be the type species of the foregoing genus.

(b) The family-group name MARGARITANINAE Ortmann, 1910 (type genus : *Margaritana* Schumacher, 1817) is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(2) It is hereby ruled that the spelling *Margartifera* Schumacher, 1816, is an Invalid Original Spelling and that the emendation of this name to *Margaritifera* is a Valid Emendation.

(3) It is hereby ruled that of the two Original Spellings *Lymnaea* and *Lymnoea* used for the same genus by Lamarck in the same paper in 1799 the spelling *Lymnaea* is the Valid Original Spelling, having been so selected to the exclusion of the spelling *Lymnoea* by Lamarck acting as First Reviser in 1801.

(4) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* with the Name Numbers severally specified below :—

- (a) *Unio* Philipsson, 1788 (gender : masculine) (type species, by designation under the Plenary Powers in (1)(a) above : *Mya pictorum* Linnaeus, 1758) (Name No. 1235) ;
- (b) *Margaritifera* (ruled under (2) above to be a Valid Emendation of *Margaritifera*) Schumacher, 1816 (gender : feminine) (type species, by monotypy : *Mya margaritifera* Linnaeus, 1758) (Name No. 1236) ;
- (c) *Lymnaea* Lamarck, 1799 (a spelling ruled under (3) above to be the Valid Original Spelling) (gender: feminine) (type species, by selection by Fleming (J) (1818) : *Helix stagnalis* Linnaeus, 1758) (Name No. 1237).

(5) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* with the Name Numbers severally specified below :—

- (a) *pictorum* Linnaeus, 1758, as published in the combination *Mya pictorum* (specific name of type species of *Unio* Philipsson, 1788) (Name No. 1455) ;
- (b) *margaritifera* Linnaeus, 1758, as published in the combination *Mya margaritifera* (specific name of type species of *Margaritifera* (emend. of *Margaritifera*) Schumacher, 1816) (Name No. 1456) ;
- (c) *auricularius* Spengler, 1793, as published in the combination *Unio auricularius* (Name No. 1457) ;



(6) It is hereby directed that the endorsement " specific name of type species of *Lymnaea* Lamarck, 1799 " be added to the entry relating to the specific name *stagnalis* Linnaeus, 1758, as published in the combination *Helix stagnalis*, made on the *Official List of Specific Names in Zoology* as Name No. 410 by the Ruling given in *Opinion* 336.

(7) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* with the Name Numbers severally specified below :—

- (a) *Limnaea* Poli, 1791 (a junior objective synonym of *Unio* Philipsson, 1788) (Name No. 1064) ;
- (b) *Lymnoea* Lamarck, 1799 (a name which under the Ruling given in (3) above is an Invalid Original Spelling for *Lymnaea* Lamarck, 1799) (Name No. 1065) ;
- (c) *Limnium* Oken, 1815 (a name published in a work rejected for nomenclatorial purposes by the Ruling given in *Opinion* 417, and in addition an Invalid Original Spelling for *Lymnium* Oken, 1815) (Name No. 1066) ;
- (d) *Lymnaea* Oken, 1815 (a name published in a work rejected for nomenclatorial purposes by the Ruling given in *Opinion* 417, and in addition an Invalid Original Spelling for *Lymnium* Oken, 1815) (Name No. 1067) ;
- (e) the under-mentioned names, each of which is an Erroneous Subsequent Spelling for *Lymnaea* Lamarck, 1799 :—
  - (i) *Limnaea* Blainville, 1823 (Name No. 1068) ;
  - (ii) *Limnaeus* Pfeiffer (C.), 1821 (Name No. 1069) ;
  - (iii) *Limnea* Fleming, 1828 (Name No. 1070) ;

- (iv) *Limneus* Draparnaud, [1801] (Name No. 1071) ;
  - (v) *Limnoea* Gourdon, 1889 (Name No. 1072) ;
  - (vi) *Limnoeus* Shuttleworth, 1872 (Name No. 1073) ;
  - (vii) *Lymnaeus* Cuvier (G.L.C.F.D.), 1817 (Name No. 1074) ;
  - (viii) *Lymnea* Link, 1807 (Name No. 1075) ;
  - (ix) *Lymneus* Férussac, 1812 (Name No. 1076) ;
  - (x) *Lymnoea* Suter, 1913 (Name No. 1077) ;
  - (xi) *Limnoeus* Michelin, 1831 (Name No. 1078) ;
  - (xii) *Lymnula* Rafinesque, 1819 (Name No. 1079) ;
  - (xiii) *Lymnus* Montfort, 1810 (Name No. 1080) ;
  - (f) *Lymnium* Oken, 1815 (a name published in a work rejected for nomenclatorial purposes by the Ruling given in *Opinion* 417) (Name No. 1081) ;
  - (g) *Margaritana* Schumacher, 1817 (a junior objective synonym of *Margaritifera* (emend. of *Margartifera*) Schumacher, 1816) (Name No. 1082) ;
  - (h) *Margartifera* Schumacher, 1816 (a spelling rejected under (2) above as an Invalid Original Spelling for *Margaritifera*) (Name No. 1083).
- (8) The under-mentioned specific name is hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* with the Name Number 481 :—
- fluviatilis* Schumacher, 1816, as published in the combination *Margartifera* [sic] *fluviatilis* (a junior objective synonym of *margaritifera* Linnaeus,

1758, as published in the combination *Mya margaritifera*).

(9) The under-mentioned family-group names are hereby placed on the *Official List of Family-Group Names in Zoology* with the Name Numbers severally specified below :—

(a) LYMNAEIDAE (correction of LYMNIDIA) Rafinesque, 1815 (type genus : *Lymnaea* Lamarck, 1799) (Name No. 200) ;

(b) UNIONIDAE Fleming (J.), 1828 (type genus : *Unio* Philipsson, 1788) (Name No. 201) ;

(c) MARGARITIFERIDAE Haas (F.), 1940, as validated under the Plenary Powers in (1)(b) above (type genus : *Margaritifera* (emend. of *Margartifera*) Schumacher, 1816) for use by those workers who consider on taxonomic grounds that the genera *Margaritifera* Schumacher, 1816, and *Unio* Philipsson, 1788 (type genus of UNIONIDAE Fleming, 1828) are referable to different family-group taxa) (Name No. 202).

(10) The under-mentioned family-group names are hereby placed on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* with the Name Numbers severally specified below :—

(a) LYMNIDIA Rafinesque, 1815 (type genus : *Lymnaea* Lamarck, 1799) (an Invalid Original Spelling for LYMNAEIDAE) (Name No. 231) ;

(b) LYMNAEADAE Gray (J.E.), 1824 (type genus : *Lymnaea* Lamarck, 1799) (an Invalid Original Spelling for LYMNAEIDAE) (Name No. 232) ;

- (c) MARGARITANINAE Ortmann, 1910, as suppressed under the Plenary Powers in (1)(b) above (type genus : *Margaritana* Schumacher, 1817) (Name No. 233).

## I. THE STATEMENT OF THE CASE

In February 1950 Mr. A. E. Ellis (*Epsom College, Epsom, Surrey, England*) addressed a preliminary communication to the Office of the Commission on the question of the possible use of the Plenary Powers for the purpose of preserving the well-known generic name *Unio* Philipsson, 1788 (Class Pelecypoda) for use in its accustomed sense. Various circumstances at that time prevented any immediate progress being made in regard to this problem. In 1955, however, this case was reviewed jointly by the applicant and the Secretary with a view to the preparation of a formal application which would take account not only of the issues involved at the generic-name level but also those arising at the family-group-name level. These discussions were completed on 18th October 1955 when Mr. Ellis submitted the following definitive application to the International Commission :—

**Proposed use of the Plenary Powers to validate the currently  
accepted usage of the generic name “ *Unio* ”  
Philipsson, 1788 (Class Pelecypoda)**

By A. E. ELLIS

(*Epsom College, Epsom, England*)

The object of the present application is to ask the International Commission on Zoological Nomenclature to use its Plenary Powers to validate the currently accepted usage of the very well-known generic name *Unio* Philipsson, 1788 (Class Pelecypoda). The facts of this case are set out below.

2. The following are the references for the generic names involved in the present case :—

- (a) *Unio* Philipsson, 1788, *Dissertatio historico-naturalis sistens nova Testaceorum Genera* : 16 (type species, by selection by Turton, 1831 (*Manual Land & Fresh-water Shells Brit. Islands* : 3) : *Mya margaritifera* Linnaeus, 1758, *Syst. Nat.* (ed. 10) 1 : 671)

*Note 1* : In making the above type selection Turton cited *Mya margaritifera* Montagu, 1803 (*Testac. brit.* : 33). Montagu did not, however, publish this as a new name, his employment of this name being only a later usage of the name *Mya margaritifera* Linnaeus, 1758.

*Note 2* : This genus was established in a thesis by Philipsson, working under his master Retzius at the University of Lund. By the law or custom then obtaining the professor was treated as the author of all papers which a student under him defended. For this reason the name *Unio* and other names in this thesis have been attributed by some authors to Retzius. It is clear, however, from the title page that Philipsson was the real author of this *Dissertatio* and the name *Unio* is therefore correctly attributable to him and not to Retzius.

- (b) *Limnaea* Poli, 1791, *Testacea utriusque Siciliae* 1 : 31 (type species, by selection by Ellis, 1947 (*Synopsis Brit. Fauna* (Linn. Soc.) No. 5 : 14) : *Mya pictorum* Linnaeus, 1758, *Syst. Nat.* (ed. 10) 1 : 671)

- (c) *Lymnaea* (emend. of *Lymnoea*) Lamarck, 1799, *Mém. Soc. Hist. nat.*, Paris, 1 : 75 (type species, by selection by Fleming, 1818 (*Ency. brit. Suppl. 4th-6th Eds.* 3 : 313) : *Helix stagnalis* Linnaeus, 1758, *Syst. Nat.* (ed. 10) 1 : 774). (For discussion of the original orthography of this generic name see paragraph 8 below.)

- (d) *Lymnium* Oken, 1815, *Lehrb. Naturgesch.* 3 (Zool.) (Abth. 1) : 236, 237 (type species, by monotypy : *Mya pictorum* Linnaeus, 1758)

- (e) *Limnium* Oken, 1815, *Lehrb. Naturgesch.* 3 (Zool.) (Abth. 1) : viii (an Erroneous Original Spelling for *Lymnium* Oken, 1815)

- (f) *Lymnaea* Oken, 1815, *Lehrb. Naturgesch.* 3 (Zool.) (Abth. 1) : 236 (cited as a synonym of *Unio*)

- (g) *Margartifera* (typographical error *Margaritifera*) Schumacher, 1816, *Overs. K. Dansk. Vidensk. Selsk. Forh.* 7 : 7 (type species, by monotypy : *Margartifera fluviatilis* Schumacher, 1816, *Overs. K. Dansk. Vidensk. Selsk. Forh.* 7 : 7 (? substitute name for *Mya margaritifera* Linnaeus, 1758))

- (h) *Margaritana* Schumacher, 1817, *Essai d'un nouveau Système des Habitations des Vers Testacés* : 41, 123 (type species, by monotypy : *Margartifera fluviatilis* Schumacher, 1816)



- (i) *Mysca* Turton, 1822, *Conchylia Insularum britannicarum* : xlv, 243 (type species, by selection by Turton, 1831 (*Manual Land & Freshwater Shells Brit. Islands* : 3) : *Mya ovalis* Montagu, 1803, *Test. brit.* : 34 (a junior subjective synonym of *Unio tumidus* Philipsson, 1788, *Dissert. hist.-nat. nov. Test. Genera* : 17))

3. The well-known genus *Unio* (Order Eulamellibranchiata) was established by Philipsson in 1788 for certain freshwater mussels now classified in the superfamily UNIONACEA or NAIADES. As so established this genus included *Unio margaritiferus* (= *Mya margaritifera* Linnaeus, 1758), *Unio pictorum* (= *Mya pictorum* Linnaeus, 1758), *Unio tumidus* Philipsson, 1788 (: 17), and other species. The first of the above species was selected as the type species of the genus *Unio* by Turton in 1831. In 1847, Gray (J.E.) (*Proc. zool. Soc. Lond.* **15**(178) : 196), overlooking Turton's selection of *Mya margaritifera* Linnaeus, 1758, selected *Mya pictorum* Linnaeus, 1758, as the type species of *Unio*.

4. For so long as all the species included by Philipsson in his genus *Unio* continued to be regarded as congeneric, no difficulty arose, and the generic name *Unio* was used by most XIXth century authors for all the European freshwater UNIONACEA except those placed in the genus *Anodonta* Lamarck, 1799. During the present century, however, anatomical investigations have shown that *Mya margaritifera* Linnaeus differs in so many important features from the other species included in the genus *Unio* that it has been separated from them as a distinct genus and by some authors has even been placed in a separate family. The generic name *Margaritifera* (emend. of *Margartifera*) Schumacher, 1816, or its junior objective synonym *Margaritana* Schumacher, 1817, was accordingly brought back into use for *Mya margaritifera* Linnaeus, 1758, and the allied species *Unio auricularius* Spengler, 1793 (*Skriv. Nat. Hist. Selsk. København* **3** (Hft. 1) : 54), and is now universally employed in this sense. Under this arrangement the name *Unio* is retained for *Unio pictorum* (Linnaeus) and its allies, following Gray's type-selection of 1847.

5. In a paper published in 1941 (*J. Conch.* **21** : 265, 273) Kennard, relying upon Turton's type-selection of 1831, restored *Mya margaritifera* Linnaeus to *Unio* and revived the obscure and long-forgotten name *Lymnium* Oken, 1815, for *Mya pictorum* Linnaeus. Kennard ignored the earlier name *Limnaea* Poli, 1791, on the ground that Poli's "work has been rejected for nomenclatorial purposes" (Kennard & Woodward, 1926, *Synonymy of the British non-marine Mollusca* : 402). Poli's work is definitely binominal in character and it is not clear why Kennard considered that it should be rejected. In any case this statement that Poli's work had already been rejected is incorrect, for, as I am informed by Mr. Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, no Ruling rejecting this work has been given by the Commission. Kennard pointed out (verbally) that, if the name *Lymnium* Oken, as well as the name *Limnaea*

Poli, were to be rejected, the oldest available name for this group would be *Mysca* Turton, 1822, the type species of which is *Mya ovalis* Montagu, 1803, which is identical with *Unio tumidis* Philipsson, 1788, a species which is regarded as congeneric with the species now known as *Unio pictorum* (Linnaeus).

6. In considering this matter we may fortunately set on one side the name *Lymnium* Oken for, since the present application was first submitted to the International Commission, that body has examined the question of the availability for nomenclatorial purposes of Oken's *Lehrbuch* (Hemming, 1954, *Bull. zool. Nomencl.* 9 : 193—207) and, as I am informed by the Secretary, has decided that in the foregoing work Oken did not consistently apply the principles of binominal nomenclature and therefore that new names published in it did not thereby acquire the status of availability. I am further informed by Mr. Hemming that the foregoing decision has been embodied by the Commission in *Opinion* 417 (now in the press)<sup>1</sup>. It is therefore no longer necessary in the present case to consider further the name *Lymnium* Oken and its two variant spellings beyond noting that all of these names should now be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*.

7. Even after the disappearance of the Oken names discussed above we are still left with a twofold difficulty namely (1) that, so long as Turton's selection of *Mya margaritifera* Linnaeus as the type species of *Unio* Philipsson remains valid, the name *Unio* cannot be used for the group to which it has for so long been applied and (2) that this group would have to be known by the particularly unsuitable name *Limnaea* Poli. The use of this name for this genus could not fail to cause the greatest conceivable confusion owing to its similarity to the name *Limnaea* Lamarck, 1799, a name which has been in continuous use for a genus of freshwater Gastropoda for over one hundred and fifty years. There is therefore the strongest possible case for the use by the Commission of its Plenary Powers for the purpose of preventing the devastating confusion which would result from the application of the normal provisions of the *Règles* in this case. The action required for this purpose is that the Commission should use its Plenary Powers to set aside all existing type selections for the genus *Unio* Philipsson, 1788, and having done so, to designate *Mya pictorum* Linnaeus, 1758, to be the type species of this genus. This action would remove all the difficulties in the present case, for (a) it would restore the generic name *Unio* to the group of species to which that name has always been applied and (b) would render harmless the name *Limnaea* Poli, 1791, which would then fall as a junior objective synonym of *Unio* Philipsson, 1788. Finally, under this arrangement the name *Mysca* Turton, 1822, would remain in well-deserved obscurity, becoming a junior subjective synonym of *Unio* Philipsson.

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<sup>1</sup> This *Opinion* was published on 1st September 1956 (*Ops. Decls. int. Comm. zool. Nomencl.* 14 : 1—42).

8. As noted in the opening paragraph of the present application, Lamarck when introducing the generic name *Lymnaea*, used the erroneous spelling *Lymnoea*. This was, however, corrected to *Lymnaea* in the later part of Lamarck's paper. Accordingly, *Lymnoea* Lamarck is an Invalid Original Spelling and *Lymnaea* is a Valid Emendation. In this connection attention may be given to the following notes published by Kennard & Woodward in 1926 and by Winckworth in 1939 :—

- (a) Kennard (A.S.) and Woodward (B.B.), 1926, *Synonymy of the British Non-Marine Mollusca* : 41 :—

“*Lymnoea* & *Lymnaea* : Lamarck, *Mém. Soc. His. Nat. Paris*, i, p. 75. The ‘oe’ was a typographical error and occurs in several other words in the early part of the paper. This was rectified in the latter portion of the paper and the concluding table.”

- (b) Winckworth (R.), 1939, *Proc. Malac. Soc. Lond.* 23 : 315

“*Lymnaea* Lamarck : The original spelling of the generic name is *Lymnoea* with a digraph for *oe*, which is clearly a misprint for *ae*. The *y* has been altered by Agassiz and others, since the word is presumably derived from *λινυκίος* ; Lamarck, however, consistently used a *y* in both vernacular and Latin forms in 1799, in the repetition of the generic proposal in 1801 as *Lymnaea* and in the *Animaux sans Vertèbres*.”

9. The name *Lymnaea* Lamarck has suffered an exceptionally large number of variant spellings of which no less than thirteen were listed by Kennard & Woodward (1926, *loc. cit.* : 41, 42). These were as follows :—

- Limnea* Blainville, 1823, *Dictionnaire des Sciences naturelles* 26 : 449  
*Limnaeus* Pfeiffer (C.), 1821, *Naturgeschichte Deutscher Land- und Süßwasser-Mollusken* 1 : 14, 84  
*Limnea* Fleming, 1828, *A History of British Animals* : 273  
*Limneus* Draparnaud, [1801], *Tabl. Moll. France* : 47  
*Limnoea* Gourdon, 1889, *Catalogue raisonné des Mollusques de la Pique et de ses Affluents* : 70  
*Limnoeus* Shuttleworth, 1872, *Enumeration des Plantes . . . ainsi que des Mollusques terrestres et de l'eau douce de l'Ile Corse* : 28  
*Lymnaeus* Cuvier (G.L.C.F.D.), 1817, *Règne Anim.* 2 : 412  
*Lymnea* Link, 1807, *Beschreibung der Naturalien-Sammlung der Universität zu Rostock* 3 : 138  
*Lymneus* Férussac, 1812, *Ann. Mus. Hist. nat.*, Paris 9 : 252  
*Lymnoea* Suter, 1913, *Man. N.Z. Mollusca* : 604  
*Lymnoeus* Michelin, 1831, *Mag. Zool.* 1 (Moll.) : 22  
*Lymnula* Rafinesque, 1819, *J. Phys. Chim. Hist. nat.* 88 : 423  
*Lymnus* Montfort, 1810, *Conchyliol. syst. Classif. méth. Coquilles* 2 : 262

10. Both the genus *Unio* Philipsson and the genus *Lymnaea* Lamarck are the type genera of universally recognised family-group taxa. The genus *Lymnaea* Lamarck was first made the type genus of a family-group taxon by Rafinesque, 1815 (*Analyse Nature* : 144), who regarded this taxon as being of family rank. He applied to it the defectively formed name LYMNIDIA. Nine years later Gray (J.E.) (*Ann. Phil.* 25 : 107) also erected a family-group taxon on the basis of this genus, calling this taxon by the defectively formed name LYMNAEADAE. The genus *Unio* Philipsson was first made the basis of a name for a family-group taxon by Fleming (J.) in 1828 (*Hist. Brit. Anim.* : 408, 415), who established the family UNIONIDAE. Finally, a family-group name MARGARITIFERIDAE based upon the name *Margaritifera* Schumacher, 1816, was established by Haas (F.) in 1940 (*Publ. Field Mus. (Zool. Ser.)* 24 : 119). This family is recognised by those workers who (as explained in paragraph 4 above) consider that its type genus (*Margaritifera* Schumacher) and *Unio* Philipsson, as now proposed to be defined under the Plenary Powers (i.e. with *Mya pictorum* Linnaeus as type species) are referable to different family-group taxa. I have pleasure in acknowledging the help very kindly given by Dr. L. R. Cox (*British Museum (Natural History)*) in tracing the place where the foregoing family-group names were first published.

11. In the light of the considerations set forth above, the International Commission on Zoological Nomenclature is now asked :—

- (1) to use its Plenary Powers (a) to set aside all selections of type species for the genus *Unio* Philipsson, 1788, made prior to the Ruling now asked for, and (b), having done so, to designate *Mya pictorum* Linnaeus, 1758, to be the type species of the foregoing genus ;
- (2) to place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—
  - (a) *Unio* Philipsson, 1788 (gender : masculine) (type species by designation under the Plenary Powers under (1)(b) above : *Mya pictorum* Linnaeus, 1758) ;
  - (b) *Margaritifera* (emend. of *Margartifera*) Schumacher, 1816 (gender : feminine) (type species, by monotypy : *Mya margaritifera* Linnaeus, 1758) ;
  - (c) *Lymnaea* Lamarck, 1799 (gender : feminine) (type species, by selection by Fleming (J.) (1818) : *Helix stagnalis* Linnaeus, 1758) ;
- (3) to place the under-mentioned specific names on the *Official List of Specific Names in Zoology* :—
  - (a) *pictorum* Linnaeus, 1758, as published in the combination *Mya pictorum* (specific name of type species of *Unio* Philipsson, 1788) ;



- (b) *margaritifera* Linnaeus, 1758, as published in the combination *Mya margaritifera* (specific name of type species of *Margaritifera* (emend. of *Margartifera*) Schumacher, 1816) ;
  - (c) *stagnalis* Linnaeus, 1758, as published in the combination *Helix stagnalis* (specific name of type species of *Lymnaea* Lamarck, 1799) ;
  - (d) *auricularius* Spengler, 1793, as published in the combination *Unio auricularius* ;
  - (e) *tumidus* Philipsson, 1788, as published in the combination *Unio tumidus* ;
- (4) to place the under-mentioned generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—
- (a) *Limnaea* Poli, 1791 (a junior objective synonym of *Unio* Philipsson, 1788) ;
  - (b) *Lymnoea* Lamarck, 1799 (an Invalid Original Spelling for *Lymnaea* Lamarck, 1799) ;
  - (c) *Limnium* Oken, 1815 (a name published in a work rejected for nomenclatorial purposes ; an Invalid Original Spelling for *Lymnium* Oken, 1815) ;
  - (d) *Lymnaea* Oken, 1815 (a name published in a work rejected for nomenclatorial purposes; an Invalid Original Spelling for *Lymnium* Oken, 1815) ;
  - (e) the thirteen Erroneous Subsequent Spellings for *Lymnaea* Lamarck, 1799, listed in paragraph 9 of the present application ;
  - (f) *Lymnium* Oken, 1815 (a name published in a work rejected for nomenclatorial purposes) ;
  - (g) *Margaritana* Schumacher, 1817 (a junior objective synonym of *Margaritifera* (emend. of *Margartifera*) Schumacher, 1816) ;
  - (h) *Margartifera* Schumacher, 1816 (an Invalid Original Spelling for *Margaritifera* Schumacher, 1816) ;
- (5) to place the under-mentioned specific name on the *Official Index of Rejected and Invalid Specific Names in Zoology* :—*fluviatilis* Schumacher, 1816, as published in the combination *Margartifera* [sic] *fluviatilis* (a junior objective synonym of *margaritifera* Linnaeus, 1758, as published in the combination *Mya margaritifera*) ;



(6) to place the under-mentioned family-group names on the *Official List of Family-Group Names in Zoology* :—

- (a) LYMNAEIDAE (correction of LYMNIDIA) Rafinesque, 1815 (type genus : *Lymnaea* Lamarck, 1799) ;
- (b) UNIONIDAE Fleming (J.), 1828 (type genus : *Unio* Philipsson, 1788) ;
- (c) MARGARITIFERIDAE Haas (F.), 1940 (type genus : *Margaritifera* Schumacher, 1816) (for use by those workers who consider on taxonomic grounds that the genera *Margaritifera* Schumacher, 1816, and *Unio* Philipsson, 1788 (type genus of UNIONIDAE Fleming, 1828) are referable to different family-group taxa) ;

(7) to place the under-mentioned family-group names on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* :—

- (a) LYMNIDIA Rafinesque, 1815 (type genus : *Lymnaea* Lamarck, 1799) (an Invalid Original Spelling for LYMNAEIDAE) ;
- (b) LYMNAEADAE Gray (J.E.), 1824 (type genus : *Lymnaea* Lamarck, 1799) (an Invalid Original Spelling for LYMNAEIDAE).

## II. THE SUBSEQUENT HISTORY OF THE CASE

**2. Registration of the present application :** Upon the receipt in 1950 of Mr. Ellis' preliminary communication the question of the preservation of the generic name *Unio* Philipsson, 1788 (Class Pelecypoda), for use in its accustomed sense was allotted the Registered Number Z.N.(S.) 451.

**3. Publication of the present application :** The present application was sent to the printer on 30th November 1955 and was published on 9th May 1956 in Part II of Volume 11 of the *Bulletin of Zoological Nomenclature* (Ellis, 1956, *Bull. zool. Nomencl.* **11** : 337—343).

**4. Issue of Public Notices :** Under the revised procedure prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 9th May 1956 (a) in Part 11 of Volume 11 of the *Bulletin of Zoological Nomenclature* (the Part in which Mr. Ellis' application was published) and (b) to the other prescribed serial publications. In addition, such Notice was given to four general zoological serial publications and to two specialist serials.

**5. Support Received :** Support for the present application was received from seven specialists (United States, three (3) ; Denmark, one (1) ; Germany, one (1) ; The Netherlands, one (1) ; United Kingdom, one (1)). In the case of five of the specialists concerned the support so given was unqualified. As regards the other two, one would have preferred that the generic name *Margaritana* Schumacher, 1817, should be retained by the suppression under the Plenary Powers of its senior objective synonym *Margaritifera* Schumacher, 1816, while the other, though not advocating the validation of the generic name *Margaritana*, expressed a preference for the retention of the family group-name MARGARITANINAE Ortmann, 1910 (i.e. the name based upon the invalid generic name *Margaritana* Schumacher, 1817) instead of upon the name MARGARITIFERIDAE Haas, 1940, the name based upon the valid name (*Margaritifera* Schumacher, 1816) for the type genus.

**6. Support received from H. Lemche (Universitetets Zoologiske Museum, Copenhagen, Denmark) :** On 24th May 1956 Dr. H. Lemche (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) addressed the following note of support to the Office of the Commission (Lemche, 1956, *Bull. zool. Nomencl.* **12** : 59) :

Concerning the names *Lymnaea* and *Unio*, I would like to give my strongest support to the proposal presented by Mr. Ellis.

**7. Support received from Joshua L. Baily, Jr. (San Diego California, U.S.A.) :** On 30th May 1956 Dr. Joshua L. Baily, Jr.

(San Diego, California, U.S.A.) addressed the following letter to the Office of the Commission in support of the present case :—

Mr. A. E. Ellis has requested action by you looking toward the validation of certain generic names of freshwater mollusca and the family-group names to be derived from them. These names are as follows :—*Unio* Philipsson, 1788 ; *Lymnaea* Lamarck, 1799 ; *Margaritifera* Schumacher, 1816. I am in complete agreement with Mr. Ellis as far as the first two of these names are concerned, and I wish to give his application the strongest possible support, but it seems to me that the case of the name *Margaritifera* is fraught with certain objections of a technical nature that make it desirable to withdraw this name from the application and give it separate consideration with a different number.

The name given to this genus by Schumacher (*Overs. K. Vidensk. Selsk. Forh.* 7 : 7) was spelled *Margartifera*. That this was a printer's error is almost certainly indicated by the fact that the type of the genus (according to Mr. Ellis) is *Margaritifera fluviatilis* Schumacher, 1816 = *Mya margaritifera* Linnaeus, 1758. In those days it was an accepted practice when establishing a new monotypic genus to replace the old specific name by a new one, and then use the old specific name for the new genus. Apparently this was Schumacher's intention. But there is other extrinsic evidence to support the belief that the new genus was intended to be called *Margaritifera*. In the following year Schumacher renamed it *Margaritana*. It is difficult to understand why he did this unless he believed the original name to be preoccupied. The spelling *Margartifera* had not been used before, but the spelling *Margaritifera* had, and these earlier usages must now be considered.

The first of these was by J. Woodward as early as 1728. I do not know where this name was published first, but it is used by Dall (1898, *Trans. Wagner Free Inst. Sci.* 3(4) : 668). The second use was by P. Browne 1756 (*Civil and Natural History of Jamaica* : 412) which was pre-Linnaean and has no standing. The third was by the same author in a later edition of the same work published in 1789 (: 412) but this work is not consistently binomial and also has no standing. The fourth use was by G. Humphrey in 1797 (*Museum Calonnianum*) but this work was published anonymously and was rejected by your predecessors in their *Opinion* 51. The fifth use was in 1811 by Megerle von Muhlfeldt (*Ges. Naturf. Fr. Berlin Jahr.* 5 : 66) but this author used a slightly modified orthography, *Margaritiphora* which is the same Greek name rendered into Latin by a different method of transliteration. As the result of this difference in spelling Megerle's name does not prejudice that given a few years later by Schumacher ; the two are not orthographic homonyms but they are etymological and phonetic homonyms.

These early uses all apply to the marine genus to which Röding (*Museum Boltenianum*) gave the name *Pinctada* in 1798, by which it is generally and correctly known. Nevertheless, the name *Margaritifera* has been used spasmodically by several subsequent writers for *Pinctada*, among them the Adams Brothers (1857, *Gen. Rec. Moll.* 2 : 525), Harris (1897, *Cat. Tert. Moll. Brit. Mus.* (1) : 325), Jameson, (1901, *Proc. zool. Soc. Lond.* 1 : 372) and the author of an anonymous brochure without date, published anonymously before 1938, and financed ostensibly by Michimoto, the Japanese manufacturer of artificially cultured pearls, though presumably not written by him.

Illegal uses such as these have, of course, no bearing on the availability of the name for the genus to which Schumacher applied it, but whether legal or not, the use of the same name in two different senses is always confusing, especially to beginners. Some authorities maintain that nomenclature was not made for amateurs and so tend to belittle the amateur, all unmindful of the fact that the greatest scholars were all beginners once. Schumacher seems to have sensed this, and his attempt to substitute the name *Margaritana* in 1817 for the earlier *Margaritifera*, 1816, seems to have been due to a feeling that the first name was objectionable. It must be remembered that Schumacher lived before the International Commission on Zoological Nomenclature and the rules which it has laid down for our guidance and from which the unavailability of the names given by Woodward, Browne and Humphrey derives, had not come into existence. Further, all subsequent writers seem to have been of the same mind, for no one, so far as I know, has ever called this genus anything but *Margaritana* Schumacher, 1817 (*Essai nouv. Syst. Hab. Vers Test.* 41 : 123) until 1925 when Kennard, Salisbury, and Woodward (*Proc. Malac. Soc. London* 16 : 276) sought to reject *Margaritana* and to restore *Margaritifera*.

There is yet another reason why I should prefer the name *Margaritana* to *Margaritifera*. In 1911 Ortmann (*Nautilus* 25 : 6) found this genus to differ so widely from the type of the UNIONIDAE that he segregated it in separate family which he called MARGARITANIDAE. In 1912 Hannibal (*Proc. Malac. Soc. London* 10 : 118) accepted this name. In 1914 Simpson (*Descr. Cat. Naiad.* : 512) republished the name but rejected it on taxonomic rather than on nomenclatorial grounds ; he seems to imply without actually saying so that if the genus did differ sufficiently to merit a separate family the name of that family should be MARGARITANIDAE. Finally, in 1918, Walker (*Spec. Publ. Univ. Mich. Mus. Zool.* 6 : 39, 165) accepted this family name and as he was considered during his lifetime to be the world's authority on this group his influence has been rather great, and no one thought of calling the family MARGARITIFERIDAE until Haas (*Publ. Field. Mus. (Zool. Ser.* 24 : 119) did so in 1940.



When Kennard, Salisbury and Woodward (*loc. cit.*) rejected the name *Margaritana* they did not at the same time reject the family name MARGARITANIDAE. There is nothing under the Rules now in effect to prevent the co-existence of the genus *Margaritifera* and the family MARGARITANIDAE. But I think everyone would find such a situation highly unsatisfactory, and one that can be rectified only by suspension of the Rules. Either a generic or a familial name must be suppressed. Mr. Ellis has asked for the placement of the family name MARGARITIFERIDAE on the *Official List*, but I doubt if this can be done without at the same time suppressing the older name MARGARITANIDAE, which Mr. Ellis has not asked for. To attempt to resolve this impasse without suspension of the Rules would give us a legal family name based upon an illegal generic name.

The late Junius Henderson (1928, *Nautilus* **41** : 91) seems to have shared my preference for *Margaritana*, for he wrote "This seems to be an instance justifying the committee on zoological nomenclature in exercising its discretionary power by validating the name *Margaritana*." And Dr. Henning Lemche (1956, *Bull. zool. Nomencl.* **12** : 59) has urged strongly the validation of *Lymnaea* and *Unio*, but says nothing in support of *Margaritifera*.

In view of the foregoing I therefore request that you suspend the Rules to suppress the names *Margartifera* and *Margaritifera* Schumacher, 1816, validate *Margaritana* Schumacher, 1817, with its type species *Margaritifera fluviatilis* Schumacher, 1816, = *Mya margaritifera* Linnaeus, 1758, and the family name MARGARITANIDAE Ortmann, 1911, and place all names so validated on the appropriate *Official Lists*.

To summarise my argument briefly :

- (a) The name *Margaritana* is universally understood and was used for over a century by everyone.
- (b) The name *Margaritifera* has been used for nearly two centuries (albeit illegally) for an entirely different genus.
- (c) The name of the family for the genus hereinunder consideration is MARGARITANIDAE.

**8. Support received from C. O. van Regteren Altena (Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands) :** On 16th July 1956 Dr. C. O. van Regteren Altena (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) addressed the



following letter of support to the Office of the Commission (van Regteren Altena, 1956, *Bull. zool. Nomencl.* **12** : 180) :—

Mr. A. E. Ellis sent me a reprint of his paper in the *Bulletin*, in which he asks the International Commission on Zoological Nomenclature to validate the currently accepted usage of the generic name *Unio* Philipsson, 1788. I think that the propositions made under para. 11 of this paper are all very sound, and will avoid confusion in the use of some often used generic names of Mollusca.

**9. Support received from H. B. Baker (University of Pennsylvania, Philadelphia, U.S.A.) :** On 25th July 1956 Dr. H. B. Baker (*University of Pennsylvania, Philadelphia, U.S.A.*) addressed the following letter of support to the Office of the Commission (Baker, 1956, *Bull. zool. Nomencl.* **12** : 220) :—

The proposal by Ellis to validate *Unio* and *Lymnaea* would be excellent. LYMNIDAE Rafinesque would be simpler, but LYMNAEIDAE better known. *Margaritana* has been used more than *Margaritifera*, but either would be acceptable.

**10. Support received from H. Watson (Cambridge, England) :** On 3rd September 1956 Mr. Hugh Watson (*Cambridge, England*) addressed the following letter to the Office of the Commission in support of the present case (Watson, 1956, *Bull. zool. Nomencl.* **12** : 308) :—

I strongly support the application of Mr. A. E. Ellis asking the International Commission to use its Plenary Powers to validate the currently accepted usage of the well-known generic name *Unio* Philipsson, 1788, with *Mya pictorum* Linnaeus as the type species, instead of transferring the name *Unio* to the distinct genus containing *Mya margaritifera* Linnaeus, and employing the name *Limnaea* Poli, 1791, for that containing *Mya pictorum*, as the strict application of the ordinary Rules would seem to require. It is obvious that thus to transfer the name *Unio* to a different genus from that to which it has been applied for more than a century and to use in its place a name so closely resembling the well-known generic name *Lymnaea* Lamarck, 1799, widely used for a common genus of fresh-water Gastropods, would cause the utmost confusion and should be prevented. But the action required for this purpose is merely for the Commission to set aside all type selections of the genus *Unio* Philipsson prior to Gray's selection of *Mya pictorum* Linnaeus made in 1847 and widely followed

ever since thus making this selection definitely valid. For the Commission to reject this and all other type selections hitherto made, and then to select anew the same species itself, as suggested, might give the false impression that the selection was taken on the initiative of the Commission itself, whereas in fact it was first put forward by Gray.

**11. Support received from D. F. McMichael (The Australian Museum, Sydney, Australia) :** In September 1956 Dr. D. F. McMichael (*The Australian Museum, Sydney, Australia*) furnished the Commission with a statement concerning the present case, which he supplemented in a note written in December of that year. The text of both of these statements is reproduced below :—

**(a) Statement dated 5th September 1956**

While I am fully in agreement with the proposals to use the Plenary Powers of the International Commission for the validation of the generic names *Unio* Philipsson, *Lymnaea* Lamarck and *Margaritifera* Schumacher and their respective type species according to currently accepted usage, and while I also agree that the family names UNIONIDAE Fleming and LYMNAEIDAE Rafinesque should be confirmed, I cannot agree that the family name MARGARITIFERIDAE Haas, 1940, should be added to the *Official List of Family-Group Names in Zoology*.

The reasons are as follows :

For many years the generic name *Margaritana* Schumacher, 1817, was used for the taxon now known as *Margaritifera* Schumacher, 1816. The earlier *Margaritifera* was brought to light by Kennard, Salisbury and Woodward (1925) and *Margaritana* was shown to be a junior objective synonym. The former name is now used almost exclusively for the taxon.

The first person to separate the genus *Margaritifera* from other genera of the family UNIONIDAE was Ortmann (1910) who recognised that the taxon was worthy of sub-family rank. Later Ortmann (1911) raised the group to full family rank, but since the generic name then in use was *Margaritana*, he wrote MARGARITANINAE (1910) and MARGARITANIDAE (1911). This usage persisted for many years and apparently it was not until 1940 that a correction of the family name to MARGARITIFERIDAE was made, in conformity with Article 5 of the International Rules then in operation.

Haas (1940) gives no indication that he was claiming to have done anything new in writing MARGARITIFERIDAE, and we must assume that he was simply emending Ortmann's name in conformity with Article 5.

Unfortunately, neither the old Rules, nor the new Copenhagen Decisions state clearly who is to be regarded as the author of a name which was emended under the old Article 5. I believe that a just interpretation would regard such emendations as analogous to the Valid Emendations of generic and specific names, when such names were wrongly constructed or based on mis-spellings. In such cases the original author is still regarded as the legitimate author of the name. If the emendation of family names is to be treated in a similar way, then the family name in question should be written MARGARITIFERIDAE Ortmann, 1910.

Another point which should be considered is that under the Copenhagen Decisions (p. 36, para. 54(1)(a)) the name MARGARITANIDAE would not have to change. Sabrosky (1954) has pointed out that if this decision is to be retroactive, much confusion would result. Follet (1956) has proposed modifications to the Copenhagen Decisions aimed at clarification of this point. Until the matter is decided, however, it seems possible that we shall have to revert to the use of the name MARGARITANIDAE, which has priority.

Both these problems should be considered by the International Commission before MARGARITIFERIDAE Haas, 1940, is added to the *Official List of Family-Group Names in Zoology*, in order that justice may be done to Ortmann and also to ensure that a name which conflicts with the Copenhagen Decisions is not added to the *Official List*.

### References

- Follett (W.I.), 1956, *Syst. Zool.* **5** : 33  
Haas (F.), 1940, *Publ. Field Mus. (Chicago) (Zool. Ser.)* **24** : 119  
Kennard, Salisbury & Woodward, 1925, *P. Malac. Soc. Lond.* **16** : 276—277  
Ortmann (A.E.), 1910, *Nautilus* **23** : 116  
Ortmann (A.E.), 1911, *Nautilus* **24** : 129  
Sabrosky (C.W.), 1954, *J. Palaeont.* **28** : 489—490

### (b) Statement dated 31st December 1956

I agree that MARGARITANIDAE should be suppressed in favour of MARGARITIFERIDAE. In fact, I think that the Copenhagen Decision, p. 36, para. 54(1)(a) is in general unwise. The Decision seems to invite confusion, and it would have been much simpler to allow the family names to change as was necessary under the old Article 5.

I can imagine that in the years to come, a great deal of confusion will result from retaining family names based on junior objective synonyms. However, this rule needs further consideration.

With regard to my comment that "a name which conflicts with the Copenhagen Decisions is not added to the *Official List*" I fully understand that if the Commission, by use of its Plenary Powers suppresses MARGARITANIDAE, then there can be no conflict with the Copenhagen Decisions. However, in Mr. Ellis's proposal, there was no mention of the existence of the name MARGARITANIDAE, and presumably if it were not suppressed by action of the Commission, someone would later attempt to resurrect it as valid under *Copenhagen Decisions on Zoological Nomenclature*, para. 54(1)(a).

**12. Support received from H. Modell (Weiler im Allgäu, Germany) :** On 31st October 1956 Dr. H. Modell (*Weiler in Allgäu, Germany*) addressed the following letter to the Office of the Commission in support of the present case :—

I agree completely with the arguments of Mr. Ellis to conserve the name *Unio*. I have used this name myself for years.

**13. Report by the Secretary on two problems involved in the present case :** On 18th November 1956 the Secretary prepared for the consideration of the International Commission the following Report on two problems involved in the present case which had been brought to notice in one case by Professor Ernst Mayr and in the other case by Dr. L. B. Holthuis subsequent to the publication of Mr. Ellis's application in the *Bulletin of Zoological Nomenclature* in May 1956 :—

**Problems arising in connection with the spelling of two generic names dealt with in Mr. A. E. Ellis's application relating to the generic name "Unio" Philipsson, 1788**

By FRANCIS HEMMING, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

Since the publication of the application relating to the generic name *Unio* Philipsson, 1788, submitted by Mr. A. E. Ellis (1956, *Bull. zool. Nomencl.* **11** : 337—343) two points have been raised in regard to one



of the names dealt with in that case, to which it is desirable that the attention of the Commission should now be drawn. The questions so raised are set out below.

**(a) The spellings “*Lymnaea*” and “*Lymnoea*” for the generic name published by Lamarck in 1799**

2. Mr. Ellis pointed out in his application that the generic name now always known as *Lymnaea* Lamarck, 1799, was originally published not only with the spelling “ae” in the penultimate syllable but also with the spelling “oe” in that syllable and after quoting the observations on this subject published by Kennard & Woodward (1926) and Winckworth (1939), accepted the “ae” spelling as a Valid Emendation, treating the “oe” spelling as an Invalid Original Spelling. Professor Ernst Mayr has since pointed out (*in litt.*, 26th May 1956) that in the terminology adopted by the Copenhagen Congress in 1953 both the foregoing spellings are “Original Spellings” and that the determination of which should be accepted as the “Valid Original Spelling” is a matter which requires to be made under the provisions of Decision 71(1)(a)(ii) of the above Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 43—44). That decision, it will be recalled, provides that, where a name was first published with more than one spelling the spelling to be accepted as the “Valid Original Spelling” is to be determined in accordance with the “First Reviser” Principle, except in cases where there is clear evidence that one of the spellings or, where there were more than two spellings, all save one of those spellings was “the result of an inadvertent error”.

3. Professor Mayr’s comment is well taken and I have therefore re-examined Lamarck’s original paper from the foregoing point of view. This examination fully confirms the conclusions as to the careless way in which this paper was printed, reached by the authors cited in the preceding paragraph. First, it must be noted that the particular name in question appears only twice in Lamarck’s paper : (a) on page 75, where it appears as “*Lymnoea*”, and (b) in the “Table” which bears no page number (which in the British Museum’s copy is bound between pages 70 and 71), where the “ae” spelling is employed, the name appearing as “*Lymnaea*”. Second, there is no consistency in this paper in regard either to the spelling or printing of names of this type. Thus, it may be noted (i) that in the text the penultimate syllable both of the name *Calyptraea* and of the name *Hyalaea* consists of the letters “ae”, each letter printed separately, whereas in the Table the corresponding syllable of these names appears as “oe” and is printed with a digraph, (ii) the second syllable of the name *Gioenia* is spelled as “oe” both in the text and in the Table, a digraph being employed in each case, and (iii) the penultimate syllable of the name *Cypraea* is spelled on both occasions as “ae”, a digraph not being employed



in either case. In my view, the evidence summarised above is amply sufficient to justify the conclusion that the "oe" spelling in *Lymnoea* is a misprint due to "an inadvertent error" and therefore that the spelling *Lymnaea* (with an "ae") is the Valid Original Spelling for this name. Unfortunately, the Copenhagen Congress gave no definition of the criteria to be followed in determining what constitutes "clear evidence" that a given spelling was due to "an inadvertent error" and there is therefore room for differences of opinion on this subject in cases such as the present. I have therefore looked for the next occasion on which this name appeared in the literature in order to determine what view the "First Reviser" took as to the spelling to be used for this name. I find that the first such occasion was two years later when in 1801 (*Syst. Anim. sans Vertèbr.* : 91) Lamarck was his own First Reviser, using for this name the "ae" spelling. The spelling *Lymnaea* is therefore beyond question the correct spelling for this generic name.

**(b) The relationship of the names "Limnaea" Poli, 1791,  
and "Lymnaea" Lamarck, 1799, to one another  
under the Law of Homonymy**

4. The question of the relationship to one another of the generic names *Limnaea* Poli, 1791, and *Lymnaea* Lamarck, 1799, under the Law of Homonymy has been raised by Dr. L. B. Holthuis (*in litt.*, 15th May 1956) as a matter requiring clarification. The history of this matter is as follows :—

- (i) Up to the meeting of the Commission held at Lisbon in 1935 there was no guidance in the *Règles* on the question whether two generic names which were identical in spelling, except for the use in one of the letter "i" and in the other of the letter "y", should be regarded as homonyms of one another, though as far back as 1910 the Eighth International Congress of Zoology at Graz had inserted in Article 35 a provision under which any two specific names differing in spelling from one another only to the foregoing extent were to be regarded as homonyms of each other.
- (ii) At Lisbon the Commission adopted a decision which was later embodied in *Opinion* 147 (1943, *Ops. Decls. int. Comm. zool. Nomencl.* 2 : 123—132) under which the provisions approved by the Graz Congress in relation to specific names (see (i) above) were applied also to generic names.
- (iii) At Paris in 1948 the Thirteenth International Congress of Zoology incorporated into the *Règles* the Ruling given in *Opinion* 147, subject to the restriction that that Ruling was to apply only to names consisting of words based on modern patronymics or on geographical features (see 1950, *Bull. zool. Nomencl.* 4 : 161—162).

- (iv) At Copenhagen in 1953 the question of what should constitute homonymy at the generic-name level was further considered and it was decided to substitute for the Rule adopted by the Paris Congress the Rule commonly known as the "One-Letter Rule" under which a difference in spelling of a single letter was to be accepted as sufficient to prevent any two generic names from being treated as homonyms of one another (see 1953, *Copenhagen Decisions zool. Nomencl.* : 78, Decision 152).

5. It will be seen from the foregoing particulars (a) that up to 1935 there was no guidance available on the question whether two such generic names as *Limnaea* and *Lymnaea* should be treated as homonyms of one another, (b) that under a decision taken at Lisbon (later embodied in *Opinion* 147) the names *Limnaea* and *Lymnaea* became homonyms of one another but (c) that in 1948, as the result of a decision by the Paris Congress, these names ceased to be homonyms, the position in this respect being unchanged by the further revision of Article 34 carried by the Copenhagen Congress in 1953. Thus in his application regarding the name *Unio* Philipsson, Mr. Ellis was perfectly correct when he treated the name *Lymnaea* Lamarck, 1799, as an available name and not as a junior homonym of *Limnaea* Poli, 1791.

#### (c) Recommendation

6. For the reasons explained in paragraphs 4 and 5 above no modification is called for in the recommendations submitted by Mr. Ellis on the question of the relationship to one another of the names *Limnaea* Poli, 1791, and *Lymnaea* Lamarck, 1799. On the other question discussed in the present note it is clear also that Mr. Ellis was correct in accepting the spelling *Lymnaea* Lamarck, 1799, in preference to the spelling *Lymnoea* used in the same paper of Lamarck's. It should be noted however that under the Copenhagen Rules the spelling *Lymnaea* Lamarck should be described not as an emendation of *Lymnoea* but as the "Valid Original Spelling" for this name through the action of Lamarck himself as First Reviser in 1801. It is recommended that in the decision to be taken in this case the terminology to be employed in this matter shall be that adopted by the Copenhagen Congress.

### III. THE DECISION TAKEN BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

**14. Issue of Voting Paper V.P.(56)44 :** On 30th November 1956 a Voting Paper (V.P.(56)44) was issued in which the Members

of the Commission were invited to vote either for, or against, " the proposal relating to the generic name *Unio* Philipsson, 1788, and associated names as set out in Points (1) to (7) in paragraph 11 on pages 341 to 343 of Volume 11 of the *Bulletin of Zoological Nomenclature* [i.e. in the paragraph numbered as above in the paper reproduced in the first paragraph of the present *Opinion*] subject to the recommendations on a question of terminology submitted in paragraph 6 of the explanatory note annexed to the present Voting Paper " [i.e. in the paragraph numbered as above in the Report reproduced in paragraph 13 of the present *Opinion*].

**15. The Prescribed Voting Period for Voting Paper V.P.(56)44 :**

As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 2nd March 1957.

**16. Reservation of the question of the relative status to be accorded to the generic name "Margaritifera" Schumacher, 1816, and "Margaritana" Schumacher, 1817 :** In returning his completed copy of Voting Paper V.P.(56)44, Professor Tadeusz Jaczewski (*Warsaw*) suggested that further consideration should be given to the question whether, instead of placing the generic names *Margaritifera* Schumacher, 1816, on the *Official List* of valid generic names and its junior objective synonym *Margaritana* Schumacher, 1817, on the *Official Index* of invalid generic names respectively, it might be better to use the Plenary Powers to suppress the first of these names and thus to validate the second. At the close of the Prescribed Voting Period this suggestion was considered by Mr. Hemming as Secretary, who took the view that the best course would be to reserve the foregoing question for further consideration by the Commission by its exclusion from the scope of the foregoing Voting Paper on the proposals submitted by Mr. Ellis in regard to the above names and consequently also in regard to the family-group names based on those generic names. Accordingly, on 2nd March 1957 Mr. Hemming executed a Minute giving directions in this sense.

**17. Particulars of the Voting on Voting Paper V.P.(56)44 :** At the close of the Prescribed Voting Period, the state of the voting on Voting Paper V.P.(56)44, exclusive of the portion relating to

the names provisionally reserved for further consideration as specified in the Minute executed by the Secretary on 2nd March 1957 (paragraph 16 above)<sup>2</sup>, was as follows :—

- (a) *Affirmative Votes had been given by the following twenty-four (24) Commissioners (arranged in the order in which Votes were received) :*

Boschma ; Vokes ; Hering ; Mayr ; Lemche ; Holthuis ; Prantl ; Bonnet ; Mertens ; Bradley (J.C.) ; Bodenheimer ; Dymond ; Kühnelt ; Riley ; Key ; Esaki ; Stoll ; do Amaral<sup>3</sup> ; Cabrera ; Sylvester-Bradley ; Tortonese ; Hemming ; Jaczewski ; Miller ;

- (b) *Negative Votes :*

None ;

- (c) *Prevented from voting by interruption of postal communications consequent upon political disturbances, one (1) :*

Hankó ;

- (d) *Voting Papers not returned :*

None.

**18. Declaration of Result of Vote on Voting Paper V.P.(56)44 :**  
On 3rd March 1957, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(56)44, signed a Certificate that the Votes cast were as set out in paragraph 17 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly

<sup>2</sup> See also in this connection paragraph 5 of the Report submitted to the Commission by the Secretary on 10th July 1957 reproduced in paragraph 19 of the present *Opinion* (: 316).

<sup>3</sup> Subject to a reservation on the question of the relative merits of the spellings *Lymnaea* and *Lymnoea*.



adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

19. Submission to the Commission in July 1957 of proposals in regard to the status to be accorded to the generic names "Margaritifera" Schumacher, 1816, and "Margaritana" Schumacher, 1817, and the family-group names based thereon : On 10th July 1957 the Secretary prepared for the consideration of the Commission the following Report on the question of the status to be accorded to those of the names involved in Mr. Ellis's application which by the Minute executed by the Secretary on 2nd March 1957 had (paragraph 16 above) been reserved for further examination, i.e. the generic names *Margaritifera* Schumacher, 1816, and *Margaritana* Schumacher, 1817, and the family-group names based on those generic names :—

**Two outstanding points on the application relating to the generic name "Unio" Philipsson, 1788 (Class Pelecypoda)**

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

I regret that it is necessary to re-submit to the Commission the application relating to the generic name *Unio* Philipsson, 1788 (Class Pelecypoda), the major issues on which were settled by the Commission by its vote on Voting Paper V.P.(56)44. The points requiring further consideration are set out below.

2. The application relating to the above generic name was submitted by Mr. A. E. Ellis and was published in May 1956 (*Bull. zool. Nomencl.* **11** : 337—343). The principal issue involved was a request that the Commission should use its Plenary Powers for the purpose of designating for the genus *Unio* Philipsson a type species in harmony with accustomed usage.

3. A number of other names were involved in this case and in compliance with the "Completeness-of-Opinions" Rule Mr. Ellis included in his application proposals in regard to these names. Among the names concerned was the generic name *Margaritifera* (emend. of *Margartifera*) Schumacher, 1816, which, being the oldest available name for the taxon concerned, was recommended by Mr. Ellis for addition to the *Official List of Generic Names in Zoology*. At the



same time Mr. Ellis recommended the addition to the *Official List of Family-Group-Names in Zoology* of the family-group name MARGARITIFERIDAE Haas (F.), 1940, based upon the name of the foregoing genus. Mr. Ellis explained also that there was a later version of the above generic name—*Margaritana* Schumacher, 1817, which, as a junior objective synonym of *Margaritifera* Schumacher, 1816, he recommended for addition to the *Official Index of Rejected and Invalid Generic Names in Zoology*. (In making this recommendation, Mr. Ellis observed (paragraph 4 of his application) that both the foregoing forms of the generic name in question had been used by various authors since the separation about forty years ago of the taxon concerned from that represented by the nominal genus *Unio* Philipsson. It was for this reason that he recommended that the normal rules should be applied in this case, the valid name (*Margaritifera*) being placed on the *Official List* and the objectively invalid name (*Margaritana*) on the *Official Index*.)

4. The proposals submitted by Mr. Ellis were supported in their entirety by six specialists: (1) Henning Lemche (*Copenhagen*); (2) G. O. Regteren Altena (*Leiden, The Netherlands*); (3) Horace B. Baker (*University of Pennsylvania*); (4) Hugh Watson (*Cambridge, England*); (5) D. F. McMichael (*Australia Museum, Sydney*); (6) Hans Modell (*Weiler in Allgäu, Germany*). A seventh specialist, Joshua L. Baily, Jr. (*San Diego, California*) also supported Mr. Ellis's proposals with the exception of those relating to the names *Margaritifera* and *Margaritana*. Dr. Baily based his preference for the validation of *Margaritana* by the suppression of *Margaritifera* on the ground: (1) that the name *Margaritifera* was an adjective and not a noun, and had moreover been published in a defective spelling (*Margartifera*); (2) that, prior to having been validly published as a generic name by Schumacher, it had appeared in certain publications which were not available for nomenclatorial purposes; (3) that the name *Margaritifera* was related linguistically to the word "Margaritiphora" which had been used as a generic name by Megerle in 1811. Dr. Baily added a comment on the family-group-name aspect involved, to which reference is made in paragraph 8 below.

5. Mr. Ellis's application was submitted to the Commission for Vote with Voting Paper V.P.(56)44 in March of this year, together with a note on certain aspects of that case which do not call for further consideration at this point. What does have to be noted is that in that vote the Commission unanimously approved the portion of Mr. Ellis's proposals which were concerned with the generic names *Margaritifera* and *Margaritana* and the family-group name MARGARITIFERIDAE, save that, in returning his affirmative vote on this case Professor Jaczewski raised the question whether, as an alternative, it would be better for the Commission to use its Plenary Powers to suppress the name *Margaritifera* for the purpose of validating its junior objective synonym *Margaritana*.

6. The foregoing question has been re-examined in the light of Professor Jaczewski's suggestion. The results of this examination may be summarised as follows :—

- (a) Mr. A. E. Ellis (the applicant in the present case), on being consulted reported as follows :—

. . . The name *Margaritifera* has certainly been used by British authors for the last thirty years, following the publication of Kennard & Woodward's "Synonymy" in 1926, and is unquestionably the oldest name. The only argument in favour of *Margaritana* is that of euphony.

- (b) The following comment previously furnished by Dr. D. F. McMichael (*Australian Museum, Sydney*) bears on the question of usage :—

For many years the generic name *Margaritana* Schumacher, 1817, was used for the taxon now known as *Margaritifera* Schumacher, 1816. The earlier name *Margaritifera* was brought to light by Kennard, Salisbury and Woodward (1925) and *Margaritana* was shown to be a junior objective synonym. The former name is now used almost exclusively for the taxon.

- (c) Of the seven specialists who commented on Mr. Ellis's application six supported the proposed addition of *Margaritifera* Schumacher to the *Official List* and the rejection of the junior synonym *Margaritana* Schumacher, and one only advocated the opposite course.

7. From the evidence summarised above, it seems clear that, while there would have been a good case for asking the Commission to validate the name *Margaritana* Schumacher, 1817, when over thirty years ago the older (and valid) name *Margaritifera* Schumacher, 1816, was unearthed by Kennard, Salisbury and Woodward, the time when such action would have been of value has since long passed, the valid name *Margaritifera* Schumacher, having firmly established itself in current usage. Moreover, the comments on Mr. Ellis's application received from specialists suggest that an attempt to set back the clock by using the Plenary Powers to revivify the invalid and now virtually moribund junior synonym *Margaritana* would be unlikely to secure any appreciable support. It is recommended therefore that the Commission should now confirm the decision taken on Voting Paper V.P.(56)44 in favour of the valid name *Margaritifera* Schumacher, 1816 and against its junior objective synonym *Margaritana* Schumacher, 1817.

8. There remains one further aspect of the present case which calls for consideration, namely the question of the name to be used for the nominal family-group taxon containing the genus *Margaritifera*

Schumacher, 1816. The proposal submitted by Mr. Ellis on this point was, it will be recalled (paragraph 3 above) that the name MARGARITIFERIDAE Haas, 1940, should be accepted and placed on the *Official List*. Unfortunately, it was not realised at the time that there was in existence an older family-group name published at the subfamily-group-name level based upon the invalid generic name *Margaritana* Schumacher, 1817. This is the name MARGARITANINAE Ortmann, 1910. In every similar case that has so far come to light the Commission has used its Plenary Powers to suppress the older family-group name based upon an invalid name for the type genus in order to validate the later family-group name based upon the valid name for the type genus. The use of the Plenary Powers for this purpose is necessary in view of the terms of the much criticised Decision 54(1)(a) taken by the Copenhagen Congress on this subject. The Public Notice given in respect of Mr. Ellis's application puts the Commission in a position to take action on the foregoing sense in the present case and it is recommended that it should do so. None of the specialists who have commented on this application have supported the adoption of the name MARGARITANINAE with the exception of Dr. Baily who did so because he advocated the validation of the generic name *Margaritana* Schumacher, 1817.

9. For the reasons set out above it is recommended that the International Commission should :—

- (1) reaffirm the decision taken by it by the vote on Voting Paper V.P.(56)44 that the invalid generic name *Margaritana* Schumacher, 1817, should be definitely rejected and placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*, its valid senior objective synonym *Margaritifera* Schumacher, 1816, being at the same time accepted and placed on the *Official List of Generic Names in Zoology* (paragraph 7 above) ;
- (2) approve under the Plenary Powers (a) the adoption of the family group name MARGARITIFERIDAE Haas, 1940, a name based on the valid generic name *Margaritifera* Schumacher, 1816, and (b) the rejection of the name MARGARITANINAE Ortmann, 1910, based on the invalid generic name *Margaritana* Schumacher, 1817, thereby giving valid force to the decision on this point taken by the vote on the Voting Paper referred to above (paragraph 8 above).

**20. Issue of Voting Paper V.P.(O.M.)(57)12 :** On 16th July 1957 a Voting Paper (V.P.(O.M.)(57)12) was issued in which the Members of the Commission were invited to vote either for, or against, "the proposal relating to the generic names *Margaritifera* Schumacher, 1816, and *Margaritana* Schumacher,

1817, and the family-group-name problem involved in connection therewith (Class Pelecypoda), as set out in Points (1) and (2) in paragraph 9 of the paper bearing the Registered Number Z.N.(S.) 451 submitted by the Secretary simultaneously with the present Voting Paper ” [i.e. in the paragraph numbered as above in the paper reproduced in paragraph 19 of the present *Opinion*].

**21. The Prescribed Voting Period for Voting Paper V.P.(O.M.) (57)12 :** As the foregoing Voting Paper was issued under the One-Month Rule, the Prescribed Voting Period closed on 16th August 1957.

**22. Particulars of the Voting on Voting Paper V.P.(O.M.) (57)12 :** At the close of the Prescribed Voting Period, the state of the voting on Voting Paper V.P.(O.M.) (57)12 was as follows :—

(a) *Affirmative Votes had been given by the following twenty-two (22) Commissioners (arranged in the order in which Votes were received) :*

Bodenheimer ; Holthuis ; Sylvester-Bradley ; Hering ;  
Mertens ; Vokes ; Cabrera ; Jaczewski ; Esaki ;  
Bradley (J.C.) ; Stoll ; Prantl ; Boschma ; Hankó ;  
Key ; do Amaral ; Bonnet ; Tortonese ; Dymond ;  
Hemming ; Lemche ; Kühnelt ;

(b) *Negative Votes, one (1) :*

Mayr ;

(c) *On Leave of Absence, one (1) :*

Riley ;

(d) *Voting Papers not returned, one (1) :*

Miller.

**23. Declaration of Result of Vote on Voting Paper V.P.(O.M.) (57)12 :** On 17th August 1957, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the



Vote taken on Voting Paper V.P.(O.M.)(57)12, signed a Certificate that the Votes cast were as set out in paragraph 22 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

**24. Withdrawal of proposals relating to two specific names :**

Following the routine checking of the documents relating to the present case, Mr. Hemming on 20th August 1957 executed a Minute (1) taking note that the names *stagnalis* Linnaeus, 1758, as published in the combination *Helix stagnalis*, and *tumidus* Philipsson, 1788, as published in the combination *Unio tumidus*, proposed for addition to the *Official List* in the present application had already been placed on that *List* by the Ruling given in *Opinion* 336, and (2) directing that the above proposals be therefore treated as having been withdrawn. At the same time Mr. Hemming gave directions that the entry made in the above *Opinion* in respect of the first of the above names be endorsed “ (specific name of type species *Lymnaea* Lamarck, 1799) ”.

**25. Preparation of the Ruling given in the present “ Opinion ” :**

On 21st August 1957 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposals approved by the International Commission in its Vote on Voting Paper V.P.(56)44, as supplemented by its vote on Voting Paper V.P.(O.M.)(57)12, subject to the adjustment specified in paragraph 24 above.

**26. Original References :** The following references for the generic and specific names placed on *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

*auricularis*, *Unio*, Spengler, 1793, *Skriv. naturh. Selsk. København* 3 (Hft. 1) : 54

*fluviatilis*, *Margartifera* [sic], Schumacher, 1816, *Overs. K. Dansk. Vidensk. Selsk. Forh.* 7 : 7

*Limnaea* Poli, 1791, *Test. utriusque Siciliae* 1 : 31

*Limnaea* Blainville, 1823, *Dict. Sci. nat.* 26 : 449



- Linnaeus* Pfeiffer (C.), 1821, *Naturgesch. Deutsch. Land- u. Süßwass.-Moll.* **1** : 14, 84
- Linnea* Fleming, 1828, *Hist. Brit. Anim.* : 273
- Linneus* Draparnaud, [1801], *Tabl. Moll. France* : 47
- Limnium* Oken, 1815, *Lehrb. Naturgesch.* **3** (Zool.) (Abth. 1) : viii
- Limnoea* Gourdon, 1889, *Cat. rais. Moll. Pique et Affluents* : 70
- Linnoeus* Shuttleworth, 1872, *Enum. Plantes . . . Moll. terrestr. eau douce Ile de Corse* : 28
- Lymnaea* Lamarck, 1799, *Mém. Soc. Hist. nat.*, Paris **1** : 75
- Lymnaea* Oken, 1815, *Lehrb. Naturgesch.* **3** (Zool.) (Abth. 1) : 236
- Lymnaeus* Cuvier (G.L.C.F.D.), 1817, *Règne Anim.* **2** : 412
- Lymnea* Link, 1807, *Besch. Nat.-Samml. Univ. Rostock* **3** : 138
- Lymneus* Férussac, 1812, *Ann. Mus. Hist. nat.*, Paris **9** : 252
- Lymnium* Oken, 1815, *Lehrb. Naturgesch.* **3** (Zool.) (Abth. 1) : 236, 237
- Lymnoea* Lamarck, 1799, *Mém. Soc. Hist. nat.*, Paris **1** : 75
- Lymnoea* Suter, 1913, *Man. N.Z. Mollusca* : 604
- Lymnoeus* Michelin, 1831, *Mag. Zool.* **1** (Moll.) : 22
- Lymnula* Rafinesque, 1819, *J. Phys. Chim. Hist. nat.* **88** : 423
- Lymnus* Montfort, 1810, *Conchyliol. syst. Classif. méth. Coquilles* **2** : 262
- Margaritana* Schumacher, 1817, *Ess. nouv. Syst. Habit. Vers. Test.* : 41, 123
- Margaritifera* (emend. of *Margartifera*) Schumacher, 1816, *Overs. K. Dansk. Vidensk. Selsk. Forh.* **7** : 7
- margaritifera*, *Mya*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 671
- Margartifera* Schumacher, 1816, [an Invalid Original Spelling for *Margaritifera* q.v.]
- pictorum*, *Mya*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 671
- Unio* Philipsson, 1788, *Dissert. hist.-nat. nov. Test. Genera* : 17

27. The following is the reference for the selection of a type species for a genus specified in the Ruling given in the present Opinion :—

For *Lymnaea* Lamarck, 1799 : Fleming (J.), 1818, *Ency. brit. Suppl.* 4th—6th Eds. **3** : 313

28. The following are the original references for the family-group names placed respectively on the *Official List* and *Official Index* of names of taxa of the family-group category :—

LYMNAEADAE Gray (J.E.), 1824, *Ann. Phil.* **25** : 107

LYMNAEIDAE (correction of LYMNIDIA) Rafinesque, 1815, *Analyse Nature* : 144

LYMNIDIA Rafinesque, 1815 (an Invalid Original Spelling for LYMNAEIDAE)

MARGARITANINAE Ortmann, 1910, *Nautilus* **23** : 114

MARGARITIFERIDAE Haas (F.), 1940, *Field Mus. Publ. (Zool. Ser.)* **24** : 119

UNIONIDAE Fleming (J.), 1828, *Hist. Brit. Anim.* : 408, 415

29. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

30. The present *Opinion* shall be known as *Opinion* Four Hundred and Ninety-Five (495) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-First day of August, Nineteen Hundred and Fifty-Seven.

*Secretary to the International Commission  
on Zoological Nomenclature*

**FRANCIS HEMMING**